

Patent Abstracts of Japan

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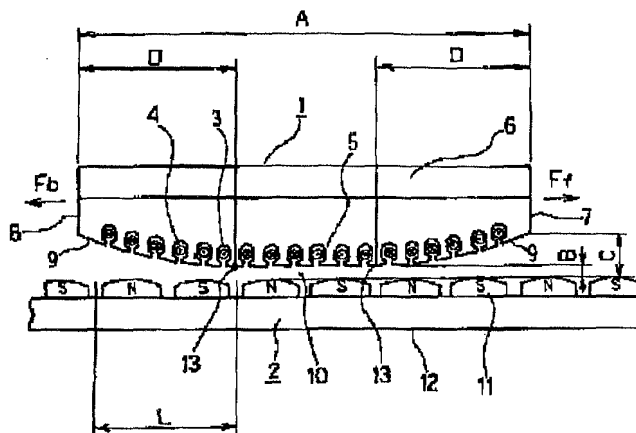
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TITLE : LINEAR MOTOR



**ABSTRACT :** PROBLEM TO BE SOLVED: To decrease thrust ripples by setting the relationships of the length of the moving direction of an N pole and an S pole, the dimension of a space, the size of the interval of the secondary-side permanent magnets at both end parts of a magnetic pole part and the distance from the position, where the dimension of the space begins to increase to the space side, to the end part within the specified ranges.

**SOLUTION:** A primary-side magnetic-pole core 1 of a linear motor faces a secondary-side permanent magnet 2 through a space 10. At the side of a front end 7 and the side of a rear end 8 of a magnetic pole part 5 in the moving direction, curved parts 9 are formed. Furthermore, when the length of the moving direction of an N pole and an S pole is set L, the size of the space 10 between the magnetic pole 5 closest to the secondary-side permanent magnet and the permanent magnet 10 is set as B and the interval between both ends 7 and 8 of the magnetic pole part 5 in the moving direction and the secondary permanent magnet is set as C, the relation ship between B and C is set as  $C > B$ , the relationship between a distance D from a position 13, where the space B begins to increase to the side of the interval to the pole-pair dimension L is set as  $D \geq L$  and the relation ship between the interval C and the pole-pair dimension L is set as  $0.5 \times L \geq C \geq 0.1 \times L$ . As a result, the linear motor, wherein thrust ripples can be decreased, is obtained.

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